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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/581,828 | 07/31/2006 | Hiromasa Shoji | 52433/849 | 7181 |
| 26646 7590 10/10/2007 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004 | | | | |
| | | | EXAMINER LAVILLA, MICHAEL E | |
| | | | ART UNIT 1794 | PAPER NUMBER |
| | | | NOTIFICATION DATE 10/10/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@kenyon.com

Office Action Summary

Application No.

10/581,828

Applicant(s)

SHOJI ET AL.

Examiner

Michael La Villa

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006 (Preliminary Amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20060602, 20070618.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
2. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding Claim 1, it is unclear what is meant by the phrase "the metal or plated sheet mainly comprising zinc and aluminum." The Specification, at the bottom of page 6, describes various sheet materials that are contemplated as being suitable for the invented coat layer and resin layer. However, these are steel materials that would not be expected to mainly comprise zinc and aluminum, even though the plating layer on such steel sheets may mainly comprise zinc or aluminum. It is unclear what is required by the "mainly" requirement. Must the weight amounts of the sum of the amounts of zinc and aluminum be greater than 50 weight percent for any layer, as opposed to for the entire sheet? Must both zinc and aluminum be present? Is there an analogous meaning with respect to weight percentages when "mainly" is used in describing the coat layer composition? It is unclear what constitutes a "metal" as silicon appears to be encompassed in view of Claim 7, notwithstanding the fact that silicon is typically not considered to be a metal.

5. Regarding Claims 1 and 3, it is unclear what is meant by the phrase "each using a metal species exclusive of chromium." It is unclear whether this requirement permits the presence of finite amounts of chromium so long as some non-chromium metal is present. Are all forms of chromium necessarily excluded?
6. Regarding Claim 5, it is unclear what is meant by the phrase "deposited like islands." Does this refer to the final structure or to the structure only as deposited? Does this mean "island-like"?
7. Regarding Claim 7, it is unclear whether the intended claim scope of the phrase "selected from zirconium, titanium and silicon" is the same as that set forth by the phrase "selected from the group consisting of zirconium, titanium and silicon."

Claim Rejections - 35 USC § 103


8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. USPA 2003/0072962. Matsuzaki et al. teaches a steel substrate that may be coated with Zn/Al alloy, that is further coated with metal oxide, including possibly silicon and titanium, of the claimed thickness, and that is further coated with resin layer of the claimed thickness. See Matsuzaki et al. (paragraphs 122-143, 147, and 505-527; and Table 2). Matsuzaki et al. may not exemplify these described articles, but suggests that effective laminates may be made in this manner. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the laminates of Matsuzaki et al. in the manner described and claimed because Matsuzaki et al. suggests that effective laminates are obtained with these structures. Matsuzaki et al. teaches that resin component may be present in the oxide layer. It would have been obvious to one of ordinary skill in the art at the time of the invention to include resin in the oxide layer in order to improve workability and corrosion resistance. It would be expected that the presence of the resin would result in crack-like and island-like geometries at the interfaces between the oxide materials and the resin. In view of the implied wide range of suggested amounts for inclusions of resin, it would be expected that claimed coverage values are obtained by the portion of the coat layer that comprises oxide, including metal oxide, at least for a subset of laminates rendered obvious.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa
25 September 2007


MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER